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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,410	04/24/2000	Kurt Heaton	TIVO0020	9083

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EXAMINER

LONSBERRY, HUNTER B

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/558,410

Applicant(s)

HEATON ET AL.

Examiner

Hunter B. Lonsberry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

The Examiner has cited U.S. Patent 6,658,663 to Bruynsteen to teach a STB, which stores audio or video content on a local mass storage system.

Applicant argues that Perlman does not teach or disclose a system that provides and IR control database residing on a local mass storage system in a set-top unit as claimed in claims 1 and 20. Applicant further argues that the Office Actions statements are not supported by disclosure in Perlman and are based on pure speculation, and that the Office Action has misinterpreted the term relay (amendment pages 14-16).

Regarding Applicant's argument, the Examiner reminds the Applicant, as noted in the previous Office Action, that Perlman is not relied upon for teaching the use of an IR control database residing on a local mass storage system. Harvey, in combination with Perlman is relied upon to teach that feature. Further, in the current response, Applicant fails to address the teachings of Harvey with respect to this feature.

In the previous response, Applicant asserted that Perlman utilizes a single remote which is a universal remote programmable to a plurality of devices, this would require that a database of devices with which the remote control can communicate with,

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is stored on the remote control itself. This is the definition of a universal remote control. Therefore, Perlman would teach the use of an IR control database. However, the Examiner notes, the use of a universal remote control in the system of Perlman would duplicate the IR blaster functionality. That is, each device coupled to the IR blaster would receive the same signal twice, once from the remote control, and once from the STB 20. This would render the Perlman system inoperable, as every command would be received twice. For example a channel change command would result in a channel being changed to the channel 2 channels higher, not one, for every command.

Perlman must maintain a database of IR control codes somewhere within the system, as a single remote control (column 10, lines 24-36), associated with the Internet terminal rather than the VCR or cable box, generates the command to control the cable box. As a single device generates the commands, which controls a plurality of different devices, a database of some type must be present within the system. However, as noted in the office action, Perlman specifically fails to teach storing the IR control database on a local mass storage system. Hence, it is Perlman in combination with Harvey, which teaches this functionality.

Applicant's failure to properly traverse the Official Notice(s) taken in the previous Office Action is taken as admission of prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 10, 20-26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,530,085 to Perlman in view of U.S. Patent 6,476,947 to Harvey and U.S. Patent 6,658,663 to Bruynsteen.

Regarding claims 1, 7, 20 and 26, Perlman discloses a method for providing control of a set top box with IR signals comprising the steps of:

Providing an IR control database containing a plurality of IR entries(column 10, lines 30-37, the Internet terminal may control multiple devices via IR codes)

Generating an IR control packet, where in the IR control packet is generated from a first IR control entry of said IR control database (column 3, lines 27-39, multiple devices may be controlled by the STB, the data is transmitted from STB 20 via IR blaster 94 to control a VCR 74); and

Controlling said STB with said IR control packet (column 3, lines 27-39).

Perlman fails to disclose providing an IR control database residing on a local mass storage system in a STB and a set top unit which stores video and or audio content received from said STB on said local mass storage system.

Harvey discloses a PC system which may act as a universal remote control in a consumer electronics network, a hard drive may be used to store IR control signals

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(column 1, lines 29-55, column 3, lines 10-22), thus enabling for the storage of IR codes for a large number of devices.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Perlman to use the local mass storage of Harvey, thus enabling for the storage of IR codes for a large number of devices.

The combination of Perlman and Harvey fails to disclose a set top unit which stores video and or audio content received from said STB on said local mass storage system.

Bruynsteen discloses a set top device which includes a hard drive which enables a user to store hours of recorded video at varying qualities and enables a user to time shift their viewing of the recorded content (column 1, lines 17-42), thus providing a convenient viewing experience by allowing the user to view programming at a time of their choosing.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Perlman and Harvey to utilize the hard drive and recording features as taught by Bruynsteen, for the advantage of providing a convenient viewing experience by allowing the user to view programming at a time of their choosing.

Regarding claims 2 and 21, Perlman discloses generating an IR control packet containing an IR control waveform for a first IR control entry (column 3, lines 27-39, packet is generated, from a stored IR waveform in the terminal 20) transmitting it to the

STB (transmitting it from terminal 20 to STB 64), and the IR entry in the database contains the waveform specification (column 3, lines 27-39, column 10, lines 30-37, the database must include the waveform specification in order to communicate with the device to be controlled).

Regarding claims 3, 4, 22 and 23, Perlman discloses that a user may control a device through a remote control.

Perlman, Harvey and Bruynsteen do not disclose the use of multiplexed serial queued communications.

The Examiner takes official notice that queuing multiplexed serial communications is well known in the art. Queuing multiplexed serial communications enables multiple devices to be controlled at the same time, and allowing multiple commands to be transmitted to the same device without the user re-entering the same command.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Perlman, Harvey and Bruynsteen to queue multiplexed serial commands, thus enabling multiple devices to be controlled at the same time, and allowing multiple commands to be transmitted to the same device without the user re-entering the same command.

Regarding claims 5, 24 and 25, Perlman discloses that the Internet terminal is able to control multiple IR enabled consumer electronics devices by providing IR

connectors to each device, a single remote may then be used to control all the devices as the Internet terminal relays the command to the appropriate device (Figure 5, column 10, lines 24-36).

Perlman inherently receives IR control entries and stores them in a database, otherwise Perlman would not know the proper frequency and coding scheme that each device uses, and thus would be unable to communicate with each device.

Regarding claim 6, Perlman discloses utilizing an IR blaster to control a device.

Perlman does not disclose providing a raw IR control library on the mass storage system, processing a raw IR control entry to create a processed entry and storing it in the database.

Harvey discloses in figure 2, that IR transmissions are loaded from HD memory, processed and then loaded into the hardware device for transmission (column 2, line 47-column 3, line 33) thus enabling for the storage of IR codes for a large number of devices. Harvey inherently has the IR control entries processed prior to becoming part of the IR database, as the IR control codes must conform to a computer readable format so that the device knows where to find the control codes for a specific device.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Perlman to utilize the HD database of Harvey, thus enabling for the storage of IR codes for a large number of devices.

Regarding claims 10 and 29, Perlman discloses the use of an Internet terminal 20, which controls a number of devices via an IR blaster.

The combination of Perlman, Harvey and Bruynsteen do not disclose correcting IR code information.

The Examiner takes official notice that updates to database entries, which are accessible via the Internet, are well known in the art. Database correction updates allow for the addition of new information related to new devices, and allow for the correction of improperly entered data.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Perlman, Harvey and Bruynsteen to update the IR database with corrections, thus enabling a user to control an associated device, if the original entry was incorrect.

3. Claims 8, 9, 13-19, 27, 28, and 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,530,085 to Perlman in view of U.S. Patent 6,476,947 to Harvey and U.S. Patent 6,658,663 to Bruynsteen in further view of U.S. Patent 6,239,718 to Hoyt.

Regarding claims 8, 9, 17, 27, 28, and 36 Perlman, Harvey and Bruynsteen disclose a system in which IR codes are stored on a hard drive, a user may utilize the database to control a plurality of devices.

Perlman, Harvey and Bruynsteen do not disclose a prototype IR control database and a timing interface.

Hoyt discloses a learning remote control, which may be implemented in a VCR or other remote device (column 7, lines 4-18), in which a user follows a setup process, the user then inputs a control command sequence such as ">12,1,5" to tune to channel 15, the >12 prefix corresponds to a Sony television, this information is stored, and the necessary prefix is send for each time a user transmits a new command, so that the proper device may interpret the command, multiple devices may be setup and their control information is stored locally, a timer is utilized to monitor when a user has completed a desired command sequence (column 5, lines 55-65, column 6, line 35-column 9, line 23), thus enabling control of new consumer electronics devices.

Therefore it would have been obvious to one skilled in the art at the time of invention to modify the hard drive of Perlman, Harvey and Bruynsteen to utilize the learning remote control codes of Hoyt to enable the control of new equipment in a user's a/v system.

Regarding claims 13, 14, 32, 33, Perlman, Harvey and Bruynsteen disclose utilizing IR codes to control an external device.

Perlman, Harvey and Bruynsteen do not disclose IR control syntax specifications.

Hoyt discloses that a user may pres 0,5 to tune to channel 5, but in order to tune to a channel greater than 9, a user would input 0,1,5, to tune to a channel 15 (column 3, lines 51-65), thus enabling a user to easily change a channel and reduce the number of keys a user needs to press.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Perlman, Harvey and Bruynsteen to utilize the syntax as taught by Hoyt, to enable a user to easily change a channel and reduce the number of keys a user needs to press.

Regarding claim 15 and 34, Hoyt is relied upon to teach the use of an enter command which is utilized as a delimiter (column 9, lines 8-10).

Regarding claim 16 and 35, , Hoyt is relied upon to teach the use of a timer, which is utilized to monitor when a user has completed a desired command sequence (column 9, lines 9-13).

Regarding claim 18-19 and 37-38, Perlman discloses a switch in figure 9b, which switches between 3 inputs.

Hoyt discloses the use of a prefix.

The combination of Perlman, Harvey, Bruynsteen and Hoyt do not disclose the use of A/B/C prefix.

The Examiner takes official notice that the use of a command to switch inputs, instead of a user toggling a switch is well known in the art. For example, pressing a video button on a remote control for a television may cause a television to switch inputs from a set top box, to a video game console or to a VCR, thus enabling a user to view

programs from different sources on the same display device without having to walk to a device to throw a switch.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Perlman, Harvey, Bruynsteen and Hoyt to utilize an input switching command, thus enabling a user to view programs from different sources on the same display device without having to walk to a device to throw a switch.

4. Claims 11, 12, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,530,085 to Perlman in view of U.S. Patent 6,476,947 to Harvey and U.S. Patent 6,658,663 to Bruynsteen in further view of U.S. Patent 6,057,874 to Michaud.

Regarding claims 11, 12, 30 and 31, Perlman discloses the use of a WebTV Plus unit, which enables a user to control multiple devices via an IR interface. Harvey discloses a local hard drive, which stores a code database.

The combination of Perlman, Harvey and Bruynsteen fails to disclose transmitting IR codes from a first database to a second device.

Michaud discloses a hard drive 102 located within a sever device within headend 12 that includes a database which contains stores control codes 108 to operate a number of VCRs according to manufacturer 104 and model number 106, a user utilizes a validation procedure to select their VCR, by entering the proper data the list of VCRs is parsed until the compatible device is listed, a second copy of the control code is

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stored at the set top box within RAM 121, thus enabling a set top terminal to control VCR via an IR interface, the database is updated by downloading data via modem (column 3, lines 16-28, 46-53, column 4, line 9-column 5, line 5, lines 22-61), thus enabling a user to update their control database and allow for control of new devices.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Perlman, Harvey and Bruynsteen, to utilize the updating of Michaud, thus enabling a user to update their control database and allow for control of new devices.

5. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,530,085 to Perlman in view of U.S. Patent 6,476,947 to Harvey, U.S. Patent 6,057,874 to Michaud and U.S. Patent 6,081,855 to DeCarmo.

Regarding claim 39, Perlman discloses a method for providing control of a set top box with IR signals comprising the steps of:

Providing an IR control database containing a plurality of IR entries(column 10, lines 30-37, the Internet terminal may control multiple devices via IR codes)

generating an IR control packet, where in the IR control packet is generated from a first IR control entry of said IR control database (column 3, lines 27-39, multiple devices may be controlled by the STB, the data is transmitted from STB 20 via IR blaster bale 94 to control a VCR 74); and

Controlling said STB with said IR control packet (column 3, lines 27-39).

Perlman fails to disclose providing an IR control database residing on a local mass storage system in a STB, processing IR entries, receiving IR control entry to add to a database, and the use of a contortions database to correct data.

Harvey discloses a PC system which may act as a universal remote control in a consumer electronics network, a hard drive may be used to store IR control signals (column 1, lines 29-55, column 3, lines 10-22), thus enabling for the storage of IR codes for a large number of devices. Harvey inherently has the IR control entries processed prior to becoming part of the IR database, as the IR control codes must conform to a computer readable format so that the device knows where to find the control codes for a specific device.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify Perlman to use the local mass storage of Harvey, thus enabling for the storage of IR codes for a large number of devices.

The combination of Perlman and Harvey fails to disclose receiving IR control entry to add to a database, and the use of a contortions database to correct data.

Michaud discloses a hard drive 102 located within a sever device within headend 12 that includes a database which contains stores control codes 108 to operate a number of VCRs according to manufacturer 104 and model number 106, a user utilizes a validation procedure to select their VCR, by entering the proper data the list of VCRs is parsed until the compatible device is listed, a second copy of the control code is stored at the set top box within RAM 121, thus enabling a set top terminal to control VCR via an IR interface, the database is updated by downloading data via modem

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(column 3, lines 16-28, 46-53, column 4, line 9-column 5, line 5, lines 22-61), thus enabling a user to update their control database and allow for control of new devices.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Perlman and Harvey, to utilize the updating of Michaud, thus enabling a user to update their control database and allow for control of new devices.

The combination of Perlman, Harvey and Michaud fails to disclose the use of a corrections-additions database to update the database.

DeCarmo discloses in figure 1, a computing system 100, which utilizes mass storage provided by a cd-rom 147 or 152, a registry 308 maintains a database of devices, and the device drivers which facilitate the communications between the computer and the input and output peripherals (column 6, lines 47-67, column 7, lines 23-column 8, line 10), when a new plug and play device is added or a new driver (the Examiner equates this as a correction, as a new driver contains information which is different from the original driver), the device is detected and a new driver is loaded into the registry database (column 9, lines 15-43), the drivers may be distributed via removable media, or via the Internet (column 10, lines 17-44), thus allowing for the computer to interface with new devices and receive updates for the devices.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Perlman, Harvey and Michaud to update the database with new drivers (corrections and additions) as taught by DeCarmo, for the

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advantage of facilitating communications between a computing device and a new device, if the original driver was not present or a new driver was added.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hunter B. Lonsberry whose telephone number is 571-272-7298. The examiner can normally be reached on Monday-Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HBL

*Hunter Lonsberry
Patent Examiner
Art Unit 2623*